

Appendix E  
**Wildlife Species Habitat Use  
by Lifeform and by Riparian Stand Type**

---

The table in this appendix presents data that were used to model riparian habitat availability to wildlife for various alternatives. Wildlife are grouped into lifeform categories, that is, species with similar habitat requirements, especially for breeding and feeding. Nine different lifeform categories of wildlife use riparian stands in the Planning Area as breeding habitat (the lifeforms are defined in Section 4.7, *Wildlife Resources*). Each of the 10 riparian stand types were evaluated as breeding habitat for each wildlife species (riparian stand types are defined in Section 4.5, *Vegetation Resources*, and illustrated in Figure 4.5-2). Each stand type was ranked as a primary breeding habitat (P), a secondary breeding habitat (S), or as nonbreeding habitat (--) for each species.

The pattern of stand type use for the species in each lifeform was summarized by adding the total number of primary and secondary habitat rankings for each lifeform. These summary patterns are positioned at the end of each species list for each lifeform. These patterns of stand use vary from lifeform to lifeform and indicate how the particular species in a lifeform may be distributed in the various stages of riparian communities.

At any one time, the amount of habitat available in each riparian stand type will vary across the landscape. Depending on the pattern of use of a wildlife lifeform, more or less habitat will be available to the species of that lifeform. For example, at one time, one forest riparian system may be dominated by sparse, smaller trees that would favor breeding for the sparrows and thrushes lifeform, while another riparian forest may be dominated by dense trees stands that provide more suitable breeding habitat for bats and owls. Forest stands not only vary in space but also through time. Foresters can project how these forest stands will vary and how much acreage will be available in each through time. When these projections of forest stand acreage are modeled together with wildlife patterns of use of stand types, wildlife biologists can assess the availability of stand habitats for different lifeforms and how this availability will affect the amount of breeding habitat through time. When these projections and analyses are completed for alternative forest treatment scenarios, the availability of breeding habitat for use by species of different lifeforms can be comparatively evaluated.

**TABLE E-1**  
Wildlife Species Habitat Use by Lifeform and by Riparian Stand Type

Wildlife Species	Riparian Stand Types <sup>1,2</sup>									
	NF	L3	H3	T3	L9	H9	T9	L15	H15	T15
<b>Lifeform 2: Frogs and Salamanders Group (8 species)</b>										
Long-toed salamander	--	--	--	--	--	--	--	--	--	--
Tailed frog	--	--	--	--	--	P	P	--	P	P
Western toad	S	S	--	--	S	--	--	S	S	S
Pacific tree frog	--	--	--	--	--	--	--	--	--	--
Spotted frog	--	--	--	--	--	--	--	--	--	--
Northwestern salamander	--	--	--	--	--	--	--	--	P	P
Pacific giant salamander	--	--	--	--	--	--	--	--	--	--
Rough-skinned newt	--	--	--	--	--	--	--	S	P	P
<b>Total no. of lifeform 2 species (Primary use of stand types)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>3</b>
<b>Total no. of lifeform 2 species (Secondary use of stand types)</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>1</b>

**Lifeform 3: Ducks and Turtles Group  
(45 species)**

Painted turtle	P	P	--	--	P	--	--	P	--	--
Western skink	P	S	--	--	S	--	--	--	--	--
Common garter snake	P	P	S	S	P	S	S	S	S	S
Ringneck snake	P	P	S	S	P	S	S	S	S	S
Eared grebe	S	--	--	--	--	--	--	--	--	--
Canada goose	P	--	--	--	--	--	--	--	--	--
Mallard	P	--	--	--	--	--	--	--	--	--
Gadwall	P	--	--	--	--	--	--	--	--	--
Pintail	P	--	--	--	--	--	--	--	--	--
Green-winged teal	P	--	--	--	--	--	--	--	--	--
Blue-winged teal	P	--	--	--	--	--	--	--	--	--
Cinnamon teal	P	--	--	--	--	--	--	--	--	--
American widgeon	P	--	--	--	--	--	--	--	--	--
Northern shoveler	P	--	--	--	--	--	--	--	--	--
Redhead	S	--	--	--	--	--	--	--	--	--
Ring-necked duck	S	--	--	--	--	--	--	--	--	--

**TABLE E-1**  
Wildlife Species Habitat Use by Lifeform and by Riparian Stand Type

Wildlife Species	Riparian Stand Types <sup>1,2</sup>									
	NF	L3	H3	T3	L9	H9	T9	L15	H15	T15
Lesser scaup	S	--	--	--	--	--	--	--	--	--
Harlequin duck	--	--	--	--	P	P	P	P	P	P
Ruddy duck	S	--	--	--	--	--	--	--	--	--
Sandhill crane	P	--	--	--	--	--	--	--	--	--
Virginia rail	S	--	--	--	--	--	--	--	--	--
Sora	S	--	--	--	--	--	--	--	--	--
American coot	S	--	--	--	--	--	--	--	--	--
Snowy plover	--	--	--	--	--	--	--	--	--	--
Killdeer	P	--	--	--	--	--	--	--	--	--
Common snipe	P	--	--	--	--	--	--	--	--	--
Greater yellowlegs	S	--	--	--	--	--	--	--	--	--
Lesser yellowlegs	S	--	--	--	--	--	--	--	--	--
Western sandpiper	S	--	--	--	--	--	--	--	--	--
Least sandpiper	S	--	--	--	--	--	--	--	--	--
Long-billed curlew	S	--	--	--	--	--	--	--	--	--
Spotted sandpiper	S	--	--	--	--	--	--	--	--	--
Willet	S	--	--	--	--	--	--	--	--	--
American avocet	S	--	--	--	--	--	--	--	--	--
Wilson's phalarope	S	--	--	--	--	--	--	--	--	--
California gull	S	--	--	--	--	--	--	--	--	--
Ring-billed gull	S	--	--	--	--	--	--	--	--	--
Franklin's gull	S	--	--	--	--	--	--	--	--	--
Forster's tern	S	--	--	--	--	--	--	--	--	--
Dipper	--	--	--	--	--	--	--	--	--	--
Marsh wren	S	--	--	--	--	--	--	--	--	--
Northern waterthrush	S	--	--	--	--	--	--	--	--	--
Common yellowthroat	S	--	--	--	--	--	--	--	--	--

**TABLE E-1**  
Wildlife Species Habitat Use by Lifeform and by Riparian Stand Type

Wildlife Species	Riparian Stand Types <sup>1,2</sup>									
	NF	L3	H3	T3	L9	H9	T9	L15	H15	T15
Western jumping mouse	S	S	--	--	S	--	--	--	--	--
Pacific jumping mouse	P	P	S	S	P	S	S	P	S	S
<b>Total no. of lifeform 3 species (Primary use of stand types)</b>	<b>17</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>
<b>Total no. of lifeform 3 species (Secondary use of stand types)</b>	<b>25</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>3</b>

**Lifeform 5: Grouse and Elk Group  
(37 species)**

Ensatina	S	S	S	S	S	P	P	S	P	P
Western red-backed salamander	S	P	P	P	P	P	P	S	S	S
Northern alligator lizard	P	P	S	S	P	S	S	S	S	S
Sagebrush lizard	P	--	--	P	--	--	--	P	--	--
Western fence lizard	P	P	--	--	P	--	--	S	--	--
Rubber boa	P	P	P	P	P	P	P	P	S	S
Racer	P	P	--	--	P	--	--	P	--	--
Gopher snake	P	P	S	S	P	S	S	P	S	S
Sharptail snake	P	P	P	P	P	P	P	P	S	S
Western terrestrial garter snake	P	P	S	S	P	S	S	S	S	S
Northwestern garter snake	P	S	--	--	S	--	--	--	--	--
Western rattlesnake	P	P	S	S	P	S	S	S	S	S
Northern harrier	P	--	--	--	--	--	--	--	--	--
Rough-legged hawk	S	--	--	--	--	--	--	--	--	--
Blue grouse	P	P	--	--	P	--	--	--	--	--
Spruce grouse	S	S	P	P	S	P	P	P	P	P
Ruffed grouse	S	P	P	P	P	P	P	P	P	P
Wild turkey	--	S	P	P	S	P	P	S	P	P
California quail	P	P	--	--	P	--	--	--	--	--
Mountain quail	P	S	--	--	S	--	--	--	--	--
Horned lark	P	--	--	--	--	--	--	--	--	--
Veery	S	S	P	P	S	P	P	--	--	--
Water pipet	P	--	--	--	--	--	--	--	--	--
Savannah sparrow	P	--	--	--	--	--	--	--	--	--

**TABLE E-1**  
Wildlife Species Habitat Use by Lifeform and by Riparian Stand Type

Wildlife Species	Riparian Stand Types <sup>1,2</sup>									
	NF	L3	H3	T3	L9	H9	T9	L15	H15	T15
Grasshopper sparrow	P	--	--	--	--	--	--	--	--	--
Vesper sparrow	P	--	--	--	--	--	--	--	--	--
Lark sparrow	P	--	--	--	--	--	--	--	--	--
Dark-eyed junco	P	P	P	P	P	P	P	P	P	P
Western meadowlark	P	--	--	--	--	--	--	--	--	--
Virginia opossum	P	P	P	P	P	P	P	P	P	P
Elk	--	P	P	P	S	S	S	S	S	S
Deer (mule, white-tailed, black-tailed)	--	P	P	P	S	S	S	S	S	S
Bushy-tailed woodrat	S	S	P	P	S	P	P	S	P	P
Snowshoe hare	S	S	P	P	S	P	P	S	--	--
Black-tailed jackrabbit	P	--	--	--	--	--	--	--	--	--
Short-eared owl	P	--	--	--	--	--	--	--	--	--
Wolverine	P	--	--	--	--	--	--	--	--	--
Lynx	--	--	--	--	S	P	P	S	P	P
<b>Total no. of lifeform 5 species (Primary use of stand types)</b>	<b>26</b>	<b>16</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>13</b>	<b>9</b>	<b>8</b>	<b>8</b>
<b>Total no. of lifeform 5 species (Secondary use of stand types)</b>	<b>8</b>	<b>8</b>	<b>5</b>	<b>5</b>	<b>10</b>	<b>6</b>	<b>6</b>	<b>12</b>	<b>9</b>	<b>9</b>

**Lifeform 6: Warblers and Porcupine Group  
(8 species)**

Common nighthawk	P	P	--	--	--	--	--	--	--	--
Common poorwill	P	S	--	--	S	--	--	--	--	--
Townsend's solitaire	S	P	P	P	P	--	--	P	S	S
Orange-crowned warbler	S	P	--	--	P	--	--	--	--	--
Nashville warbler	P	P	--	--	P	--	--	S	S	S
Wilson's warbler	P	P	S	S	P	S	S	P	S	S
Lincoln's sparrow	P	S	--	--	S	--	--	--	--	--
Common porcupine	P	P	P	P	P	P	P	P	P	P
<b>Total no. of lifeform 6 species (Primary use of stand types)</b>	<b>6</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>
<b>Total no. of lifeform 6 species (Secondary use of stand types)</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>3</b>

**TABLE E-1**  
Wildlife Species Habitat Use by Lifeform and by Riparian Stand Type

Wildlife Species	Riparian Stand Types <sup>1,2</sup>									
	NF	L3	H3	T3	L9	H9	T9	L15	H15	T15
<b>Lifeform 7: Sparrows and Thrushes Group (27 species)</b>										
Green heron	P	P	--	--	P	--	--	S	S	S
Black-crowned night heron	P	P	P	P	--	--	--	--	--	--
Swainson's hawk	--	--	--	--	--	--	--	--	--	--
Solitary sandpiper	P	P	P	P	S	S	S	S	S	S
Black-chinned hummingbird	S	P	P	P	S	S	S	S	S	S
Broad-tailed hummingbird	S	P	P	P	S	S	S	S	S	S
Calliope hummingbird	S	P	P	P	S	S	S	S	S	S
Eastern kingbird	P	P	S	S	P	S	S	S	S	S
Willow flycatcher	P	P	--	--	P	--	--	--	--	--
Black-billed magpie	P	P	S	S	P	S	S	S	S	S
Gray catbird	P	P	S	S	P	S	S	S	S	S
Swainson's thrush	S	P	P	P	P	P	P	P	P	P
Hermit thrush	P	P	S	S	P	S	S	P	P	P
Loggerhead shrike	P	P	--	--	P	--	--	--	--	--
MacGillivray's warbler	P	P	--	--	P	--	--	S	S	S
Yellow-headed blackbird	S	--	--	--	--	--	--	--	--	--
Red-winged blackbird	S	--	--	--	--	--	--	--	--	--
Brewer's blackbird	P	P	--	--	P	--	--	--	--	--
Brown-headed cowbird	P	P	P	P	P	P	P	P	P	P
Lazuli bunting	P	P	--	--	P	--	--	--	--	--
Lesser goldfinch	P	P	S	S	P	S	S	S	S	S
Green-tailed towhee	P	P	--	--	P	--	--	--	--	--
Spotted towhee	P	P	--	--	P	--	--	S	S	S
Chipping sparrow	P	P	--	--	P	--	--	S	S	S
White-crowned sparrow	P	P	--	--	P	--	--	--	--	--

**TABLE E-1**  
Wildlife Species Habitat Use by Lifeform and by Riparian Stand Type

Wildlife Species	Riparian Stand Types <sup>1,2</sup>									
	NF	L3	H3	T3	L9	H9	T9	L15	H15	T15
Fox sparrow	P	P	S	S	P	S	S	S	S	S
Song sparrow	P	P	--	--	P	--	--	--	--	--
<b>Total no. of lifeform 7 species (Primary use of stand types)</b>	<b>20</b>	<b>24</b>	<b>7</b>	<b>7</b>	<b>19</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Total no. of lifeform 7 species (Secondary use of stand types)</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>4</b>	<b>10</b>	<b>10</b>	<b>13</b>	<b>13</b>	<b>13</b>

**Lifeform 9: Waxwings and Grosbeaks Group**  
**(5 species)**

Cedar waxwing	S	P	P	P	P	P	P	P	P	P
American redstart	P	P	--	--	P	--	--	P	S	S
Black-headed grosbeak	S	P	P	P	P	P	P	P	P	P
Northern oriole	--	S	S	S	S	S	S	P	P	P
House finch	P	S	--	--	S	--	--	S	S	S
<b>Total no. of lifeform 9 species (Primary use of stand types)</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>3</b>
<b>Total no. of lifeform 9 species (Secondary use of stand types)</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>

**Lifeform 12: Herons and Eagles Group**  
**(6 species)**

Great blue heron	--	--	--	--	S	S	S	P	P	P
Red-tailed hawk	--	--	--	--	S	S	S	P	P	P
Bald eagle	--	--	--	--	S	S	S	P	P	P
Osprey	--	--	--	--	S	S	S	P	P	P
Great-horned owl	--	--	--	--	S	S	S	P	P	P
Great gray owl	--	--	--	--	S	S	S	P	P	P
<b>Total no. of lifeform 12 species (Primary use of stand types)</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>6</b>						
<b>Total no. of lifeform 12 species (Secondary use of stand types)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Lifeform 14: Bats and Owls Group**  
**(33 species)**

Wood duck	--	--	--	--	S	S	S	P	P	P
Common goldeneye	--	--	--	--	S	S	S	P	P	P
Barrow's goldeneye	--	--	--	--	S	S	S	P	P	P
Bufflehead	--	--	--	--	S	S	S	P	P	P
Hooded merganser	--	--	--	--	S	S	S	P	P	P

**TABLE E-1**  
Wildlife Species Habitat Use by Lifeform and by Riparian Stand Type

Wildlife Species	Riparian Stand Types <sup>1,2</sup>									
	NF	L3	H3	T3	L9	H9	T9	L15	H15	T15
Common merganser	--	--	--	--	S	S	S	P	P	P
American kestrel	--	--	--	--	P	P	P	P	P	P
Barn owl	--	--	--	--	S	S	S	P	P	P
Screech owl	--	--	--	--	S	S	S	P	P	P
Flammulated owl	--	--	--	--	S	S	S	P	P	P
Pygmy owl	--	--	--	--	S	S	S	P	P	P
Barred owl	--	--	--	--	S	S	S	P	P	P
Saw-whet owl	--	--	--	--	S	S	S	P	P	P
Vaux's swift	--	--	--	--	S	S	S	P	P	P
Violet-green swallow	--	--	--	--	S	S	S	P	P	P
Tree swallow	--	--	--	--	S	S	S	P	P	P
Black-capped chickadee	--	--	--	--	S	S	S	P	P	P
Mountain chickadee	--	--	--	--	S	S	S	P	P	P
Chestnut-backed chickadee	--	--	--	--	S	S	S	P	P	P
Brown creeper	--	--	--	--	S	S	S	P	P	P
Bewick's wren	P	P	--	--	P	--	--	P	P	P
House wren	P	P	--	--	P	--	--	S	S	S
Western bluebird	P	S	--	--	S	--	--	--	--	--
Mountain bluebird	P	S	--	--	S	--	--	--	--	--
<i>Myotis</i> spp.	--	--	--	--	S	S	S	P	P	P
Silver-haired bat	--	--	--	--	S	S	S	P	P	P
Big brown bat	--	--	--	--	S	S	S	P	P	P
Northern flying squirrel	--	--	--	--	S	P	P	P	P	P
Raccoon	P	P	P	P	P	P	P	P	P	P
Marten	--	--	--	--	S	S	S	P	P	P
Mink	P	P	P	P	P	P	P	P	P	P
Fisher	--	--	--	--	S	S	S	P	P	P
<b>Total no. of lifeform 14 species (Primary use of stand types)</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>29</b>	<b>29</b>	<b>29</b>
<b>Total no. of lifeform 14 species (Secondary use of stand types)</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>24</b>	<b>24</b>	<b>1</b>	<b>1</b>	<b>1</b>

**TABLE E-1**  
Wildlife Species Habitat Use by Lifeform and by Riparian Stand Type

Wildlife Species	Riparian Stand Types <sup>1, 2</sup>									
	NF	L3	H3	T3	L9	H9	T9	L15	H15	T15
<b>Lifeform 16: Kingfisher and Beaver Group (9 species)</b>										
Belted kingfisher	P	--	--	--	--	--	--	--	--	--
Bank swallow	P	--	--	--	--	--	--	--	--	--
Rough-winged swallow	P	--	--	--	--	--	--	--	--	--
Pacific water shrew	P	P	S	S	P	S	S	S	S	S
Water shrew	S	P	P	P	P	P	P	P	P	P
Beaver	--	--	--	--	--	--	--	--	--	--
Water vole	P	P	--	--	P	--	--	--	--	--
Muskrat	P	--	--	--	--	--	--	--	--	--
River otter	P	P	P	P	P	P	P	P	P	P
<b>Total no. of lifeform 16 species (Primary use of stand types)</b>	<b>7</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Total no. of lifeform 16 species (Secondary use of stand types)</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

<sup>1</sup>Riparian Stand Type classification:

NF = Non-forested

L3 = Sparse, small trees

L9 = Sparse, medium trees

L15 = Sparse, large trees

H3 = Dense, small trees

H9 = Dense, medium trees

H15 = Dense, large trees

T3 = Very dense, small trees

T9 = Very dense, medium trees

T15 = Very dense, large trees

Also see Section 4.5.

<sup>2</sup>Wildlife species' use of stand type:

P = Primary Breeding Habitat

S = Secondary (i.e., less suitable) Breeding Habitat

-- = Nonbreeding Habitat (not considered for modeling impacts of EIS alternatives)